

Title (en)

METHOD AND APPARATUS FOR COPPER PLATING USING ELECTROLESS PLATING AND ELECTROPLATING

Title (de)

VERFAHREN UND VORRICHTUNG ZUM KUPFERBESCHICHTEN UNTER VERWENDUNG DES STROMLOSEN BESCHICHTENS UND ELEKTROBESCHICHTENS

Title (fr)

PROCEDE ET APPAREIL DE CUIVRE POUR DEPOT AUTOCATALYTIQUE ET DEPOT ELECTROLYTIQUE

Publication

**EP 1099012 A4 20061115 (EN)**

Application

**EP 99933981 A 19990712**

Priority

- US 9915847 W 19990712
- US 11372398 A 19980710
- US 11123298 P 19981207
- US 11966899 P 19990211

Abstract (en)

[origin: WO0003072A1] A reactor (20) for plating a metal onto a surface of a workpiece (25) is set forth. The reactor (20) comprises a reactor bowl (35) including an electroplating solution disposed therein and an anode (55) disposed in the reactor bowl in contact with the electroplating solution. A contact assembly (85) is spaced from the anode (55) within the reactor bowl (35). The contact assembly includes a plurality of contacts (not shown) disposed to contact a peripheral edge of the surface of the workpiece to provide electroplating power to the workpiece. The contacts, which may be in the form of a Belleville ring or discreet flexures, execute wiping action against the workpiece surface as the workpiece is brought into contact therewith. The contact assembly also includes a barrier (not shown) disposed interior of the plurality of contacts.

IPC 1-7

**C25D 17/04**

IPC 8 full level

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**C25D 5/08** (2006.01)

CPC (source: EP KR US)

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**C25D 5/08** (2013.01 - EP US); **C25D 7/123** (2013.01 - EP US); **C25D 17/06** (2013.01 - EP US)

Citation (search report)

- [X] US 5447615 A 19950905 - ISHIDA HIROFUMI [JP]
- [X] US 5723387 A 19980303 - CHEN LAI-JUH [TW]
- See references of WO 0003072A1

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US 2002053510 A1 20020509; US 2003196892 A1 20031023; US 2005189213 A1 20050901; US 6309524 B1 20011030;  
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TW 88111897 A 19990927; US 35332503 A 20030128; US 38661099 A 19990831; US 71792700 A 20001120; US 8590805 A 20050321;  
US 99814201 A 20011030